What is claimed is:

1. A magnetoresistive device comprising:

Sub B2

a magnetoresistive element having two surfaces that face toward opposite directions and two side portions that connect the two surfaces to each other;

two bias field applying layers that are located adjacent to the side portions of the magnetoresistive element and apply a bias magnetic field to the magnetoresistive element; and

two electrode layers that feed a current used for signal detection to the magnetoresistive element, each of the electrode layers being adjacent to one of surfaces of each of the bias field applying layers; wherein

the two bias field applying layers are located off one of the surfaces of the magnetoresistive element; and

at least one of the electrode layers overlaps the one of the surfaces of the magnetoresistive element, and a total length of regions of the two electrode layers that are laid over the one of the surfaces of the magnetoresistive element is smaller than 0.3 μm.

2. The magnetoresistive device according to claim 1 wherein both of the two electrode layers overlap the one of the surfaces of the magnetoresistive element, and a length of the region of each of the two electrode layers that is laid over the one of the surfaces of the magnetoresistive element is smaller than 0.15 μm.

3. The magnetoresistive device according to claim 1 wherein a space between the two electrode layers is equal to or smaller than approximately

0.6 μm.

Sub B2 Con't

4. A method of manufacturing a magnetoresistive device comprising:

a magnetoresistive element having two surfaces that face toward opposite directions and two side portions that connect the two surfaces to each other;

two bias field applying layers that are located adjacent to the side portions of the magnetoresistive element and apply a bias magnetic field to the magnetoresistive element; and

two electrode layers that feed a current used for signal detection to the magnetoresistive element, each of the electrode layers being adjacent to one of surfaces of each of the bias field applying layers; the method including the steps of:

forming the magnetoresistive element;

forming the bias field applying layers; and

forming the electrode layers; wherein:

the two bias field applying layers are located off one of the surfaces of the magnetoresistive element; and

at least one of the electrode layers overlaps the one of the surfaces of the magnetoresistive element, and a total length of regions of the two electrode layers that are laid over the one of the surfaces of the magnetoresistive element is smaller than 0.3 μm.

5. The method according to claim 4 wherein both of the two electrode layers overlap the one of the surfaces of the magnetoresistive element, and a length of the region of each of the two electrode layers that is laid over the

one of the surfaces of the magnetoresistive element is smaller than 0.15 μm.

Sub B2 Cont

6. The method according to claim 4 wherein a space between the two electrode layers is equal to or smaller than approximately 0.6 μm.

7. A thin-film magnetic head comprising:

a magnetoresistive element having two surfaces that face toward opposite directions and two side portions that connect the two surfaces to each other;

two bias field applying layers that are located adjacent to the side portions of the magnetoresistive element and apply a bias magnetic field to the magnetoresistive element; and

two electrode layers that feed a current used for signal detection to the magnetoresistive element, each of the electrode layers being adjacent to one of surfaces of each of the bias field applying layers; wherein

the two bias field applying layers are located off one of the surfaces of the magnetoresistive element; and

at least one of the electrode layers overlaps the one of the surfaces of the magnetoresistive element, and a total length of regions of the two electrode layers that are laid over the one of the surfaces of the magnetoresistive element is smaller than 0.3 μm.

8. The thin-film magnetic head according to claim 7 wherein both of the two electrode layers overlap the one of the surfaces of the magnetoresistive element, and a length of the region of each of the two electrode layers that is laid over the one of the surfaces of the magnetoresistive element is smaller

than 0.15 μm.

Sub B2 Cont

9. The thin-film magnetic head according to claim 7 wherein a space between the two electrode layers is equal to or smaller than approximately 0.6 μm.

10. A method of manufacturing a thin-film magnetic head comprising:

a magnetoresistive element having two surfaces that face toward opposite directions and two side portions that connect the two surfaces to each other;

two bias field applying layers that are located adjacent to the side portions of the magnetoresistive element and apply a bias magnetic field to the magnetoresistive element; and

two electrode layers that feed a current used for signal detection to the magnetoresistive element, each of the electrode layers being adjacent to one of surfaces of each of the bias field applying layers; the method including the steps of:

forming the magnetoresistive element;

forming the bias field applying layers; and

forming the electrode layers; wherein:

the two bias field applying layers are located off one of the surfaces of the magnetoresistive element; and

at least one of the electrode layers overlaps the one of the surfaces of the magnetoresistive element, and a total length of regions of the two electrode layers that are laid over the one of the surfaces of the magnetoresistive element is smaller than 0.3 μm.

11. The method according to claim 10 wherein both of the two electrode layers overlap the one of the surfaces of the magnetoresistive element, and a length of the region of each of the two electrode layers that is laid over the one of the surfaces of the magnetoresistive element is smaller than 0.15 μm.

12. The method according to claim 10 wherein a space between the two electrode layers is equal to or smaller than approximately 0.6 μm.